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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,242	12/22/2004	Yasushi Akiyama	2002JP311	2936

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AZ ELECTRONIC MATERIALS USA CORP.
ATTENTION: INDUSTRIAL PROPERTY DEPT.
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EXAMINER	
WU, IVES J	

ART UNIT	PAPER NUMBER
1724	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/14/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/519,242	AKIYAMA ET AL.	
	Examiner	Art Unit	
	Ives Wu	1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/13/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

(1). Applicants' Information Disclosure Statement (IDS), Remarks, Amendments filed on December 13, 2006 have been received.

Claims 3 and 6 are amended. Claim12 is newly added.

The rejections of claims 1-11 in prior Office Action dated July 18, 2006 is withdrawn in response to the Remarks filed on December 13, 2006, and Affidavits filed on December 13, 2006 and December 23, 2005.

A new ground of rejections for claims 1-12 is introduced herein.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

(2). **Claims 1-11** are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Jun (JP 2001-133984), evidenced by Toshisuke et al (JP 11-124531).

As to an anti-reflective coating composition comprising a fluorine-containing polymer with a unit represented as –[$CF_2CF(OR_fCOOH)$]- in **independent claim 1** and a polymer unit represented by –[CF_2CFX]- in **claim 2**, Jun (JP 2001-133984) discloses , by using the light reflex prevention film containing the perfluoro compound which contains especially fluorination alkylamine or alkanolamine as a counter cation ([0017], line 3-4), the antireflective film material shown in the formula (7) where M is amine salt ([0022]) which includes –COOH.amine as evidenced by Toshisuke et al (JP 11-124531) - Abstract.

As to the components of an acid, an amine and an aqueous solvent capable of dissolving theses components in an antireflective coating composition in **independent claim 1**, an alkylcarboxylic acid in **claim 3**, an amine of alkylamine or alkanolamine in **claim 4**, aqueous solvent to be water in **claim 5**, Jun discloses, the water solble antireflection film ingredient characterized by including alkylamine or alkanolamine ([0018], line 5-6), the antireflective-film ingredient carrys out 0-300 wt% of various kinds of polymers for example, polyacrylic acid, polymethacrylic acid ([0028], line 1-2).in addition, pure water can be used as a diluent in the water-soluble antireflection film ([0035], line 1).

As to the pH of antireflection coating to be 1.0 to 6.0 in **independent claim 1** and **claim 9**, 1.0 to 4.0 in **claim 7** and **claim 10**, 1.6 to 2.6 in **claim 8** and **claim 11**, in view of substantially identical antireflection coating composition disclosed by Jun, and by applicants, it is examiner's position to believe that the composition of prior art Jun (JP 2001-133984) would inherently possess the pH values as claimed. The burden now is shifted to the applicants to prove otherwise. *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980).

As to limitation of **claim 6**, Jun discloses prebaking the two layers together ([0034]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

(3). **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over Jun (JP 2001-133984).

As to antireflective coating film composition including a fluorinated alkylcarboxylic acid in **claim 12**, although Jun discloses the use of polycarboxylic acid as additional polymer in the antireflection coating. However, Jun discloses the knowledge of a refractive index falling when fluorine content increases is carried out ([0017], line 11-12). Because the absorption strong against the upper antireflection film, light will not reach a lower layer resist and problem of sensitivity falls ([0014], line 1-2). The perfluoroamine salt of carboxylic acid has smaller absorption than mine salt of carboxylic acid ([0017], line 9-11). Therefore, it would be obvious to use fluorinated polyacrylic acid to benefit the above-mentioned advantage when the antireflection coating is used as upper layer.

Response to Arguments

Applicant's arguments, see Remarks, Affidavits, filed On December 23, 2005 and December 13, 2006, with respect to the rejection(s) of claim(s) 1-12 under 103 rejection in view of Toshisuke (JP 11-124531) and Mineo et al (JP08-044066) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Hatakeyama Jun (JP 2001-133984) under 102/103 rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ives Wu whose telephone number is 571-272-4245. The examiner can normally be reached on 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Examiner: Ives Wu
Art Unit: 1724
Date: February 12, 2007

DUANE SMITH
PRIMARY EXAMINER

2-12-07